

**METHODS AND COMPOSITIONS FOR MANIPULATING THE GUIDED  
NAVIGATION OF ENDOTHELIAL TUBES DURING ANGIOGENESIS**

**ABSTRACT**

Methods and compositions for manipulating the directed navigation of physiological tracking tubular structures are provided. A novel cell-bound receptor, roundabout-4 (Robo-4), is described. The Robo-4 receptor shows sequence and structural similarity to members of the roundabout family of receptors. Also, the Robo-4 receptor binds Slit ligand, a known receptor of the roundabout receptors. Polynucleotides and polypeptides of the Robo-4 receptor are described.